

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): Rear-projection screen encompassing that comprises at least one light-scattering polymethyl methacrylate layer, which comprises the rear-projection screen comprising:

a polymethyl methacrylate matrix; and

spherical scattering particles (A); and

spherical particles (B) with a different median particle size V_{50} different than the median particle size of the spherical scattering particles (A), where

wherein the spherical scattering particles (A) have a median size V_{50} in the range from 0.1 to 40 μm , the difference between the refractive index of the spherical scattering particles (A) and that of the polymethyl methacrylate matrix being in the range from 0.02 to 0.2, where

wherein the spherical particles (B) have a median size V_{50} in the range from 10 to 150 μm , the difference between the refractive index of the spherical particles (B) and that of the polymethyl methacrylate matrix being in the range from 0 to 0.2, and where

wherein the total concentration of the spherical scattering particles (A) and particles (B) is in the range from 1 to 60% by weight, based on the weight of the light-scattering polymethyl methacrylate layer, characterized in that

wherein the concentration of the spherical scattering particles (A) c_{PA} , the thickness of the light-scattering polymethyl methacrylate layer d_S and the size of the spherical scattering particles (A) D_{PA} is selected in such a way that the ratio $c_{PA} * d_S / D_{PA}^3$ is in the range from 0.001 to 0.015% by weight*mm/ μm^3 , the concentration of the spherical particles (B) c_{PB} ,

wherein the thickness of the light-scattering polymethyl methacrylate layer d_S and the size of the spherical particles (B) D_{PB} is selected in such a way that the ratio $c_{PB} * d_S / D_{PB}^3$ is in the range from 0.000005 to 0.002% by weight*mm/ μm^3 and the ratio of the square of average

surface roughness of the polymethyl methacrylate layer R_Z to the third power of the size of the spherical particles (B) R_Z^2/D_{PB}^3 is in the range from 0.0002 to 0.1300 μm^{-1} .

Claim 2 (Currently Amended): Rear-projection screen according to Claim 1, ~~characterized in that-wherein~~ the ratio of the square of average surface roughness of the polymethyl methacrylate layer R_Z to the third power of the size of the spherical particles (B) R_Z^2/D_{PB}^3 is in the range from 0.0025 to 0.0600 μm^{-1} .

Claim 3 (Currently Amended): Rear-projection screen according to Claim 1-~~or~~2, ~~characterized in that-wherein~~ the ratio of concentration of the particles (B) c_{PB} to the thickness of the light-scattering polymethyl methacrylate layer d_S c_{PB}/d_S is greater than or equal to 2.5% by weight/mm.

Claim 4 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that-wherein~~ the gloss $R85^\circ$ of the light-scattering polymethyl methacrylate layer is smaller than or equal to 40.

Claim 5 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that-wherein~~ the ratio $c_{PA} * d_S/D_{PA}^3$ is in the range from 0.0025 to 0.009% by weight*mm/ μm^2 .

Claim 6 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, ~~characterized in that-wherein~~ the ratio $c_{PB} * d_S/D_{PB}^3$ is in the range from 0.00004 to 0.0015% by weight*mm/ μm^2 .

Claim 7 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the thickness of the light-scattering polymethyl methacrylate layer is in the range from 0.05 to 1 mm.

Claim 8 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the spherical scattering particles (A) and/or spherical particles (B) encompass crosslinked polystyrene, polysilicone and/or crosslinked poly(meth)acrylates.

Claim 9 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the light-scattering polymethyl methacrylate layer has been coloured.

Claim 10 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the matrix of the light-scattering polymethyl methacrylate layer has a refractive index in the range from 1.46 to 1.54, measured for the sodium D line (589 nm) and at 20°C.

Claim 11 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the average surface roughness R_Z of the screen is in the range from 4 to 50 μm .

Claim 12 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the median size V_{50} of the spherical particles (B) is greater by at least 5 μm than the median size of the scattering particles (A).

Claim 13 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the median size V_{50} of the spherical scattering particles (A) is in the range from 5 to 20 μm .

Claim 14 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the median size V_{50} of the spherical particles (B) is in the range from 15 to 60 μm .

Claim 15 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein scratches produced on the screen using a force of at most 0.7 N are not visually detectable.

Claim 16 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the screen also encompasses a backing layer which has a halved-intensity angle smaller than 6.5°.

Claim 17 (Currently Amended): Rear-projection screen according to Claim 16, characterized in that wherein the backing layer has an average surface roughness R_z in the range from 3 to 40 μm .

Claim 18 (Currently Amended): Rear-projection screen according to Claim 16 or 17, characterized in that wherein the backing layer comprises poly(meth)acrylates.

Claim 19 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the thickness of the rear-projection screen is in the range from 0.05 to 5 mm.

Claim 20 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the transmittance of the screen is greater than or equal to 25%.

Claim 21 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the yellowness index of the screen is smaller than or equal to 12.

Claim 22 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the halved-intensity angle of the screen is greater than or equal to 15°.

Claim 23 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the scattering power of the screen is greater than or equal to 0.15.

Claim 24 (Currently Amended): Rear-projection screen according to ~~any of the preceding claims~~ Claim 1, characterized in that wherein the screen is composed of extruded polymethyl methacrylate with a path difference of at most 25 nm due to optical birefringence.

Claim 25 (Currently Amended): ~~Process~~A process for producing a rear-projection screen according to ~~any of Claims 1 to 24~~Claim 1, comprising: ~~characterized in that~~
~~extruding a moulding composition encompassing that comprises~~ polymethyl methacrylate, spherical scattering particles (A), and spherical particles (B)~~is extruded~~.

Claim 26 (Currently Amended): ~~Process~~The process according to Claim 25,
~~characterized in that comprising:~~
~~extruding a screen or a film; is extruded and~~
~~heating the extruded screen or the foil is then heated to 110-190°C for from 5 minutes~~
to 24 hours.

Claims 27-29 (Canceled).